CHAPTER 1

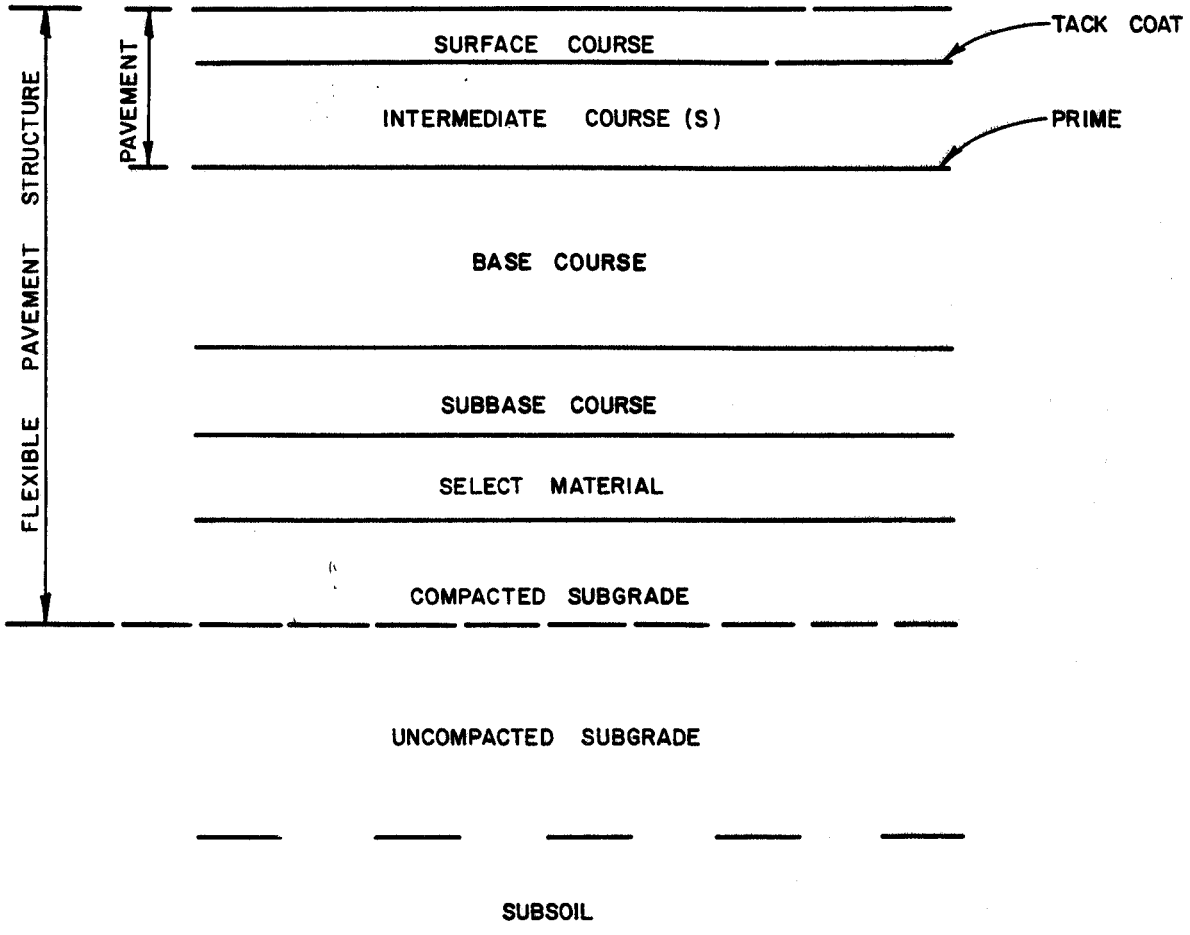
INTRODUCTION

1-1. Purpose and scope. This manual presents criteria for designing flexible pavements for roads, streets, walks, and open storage areas. It is intended for use in designing flexible pavements subject to the geometric design criteria set forth in EM 1110-3-130. Requirements for flexible pavement design for frost conditions are presented in EM 1110-3-138. State and county agencies have developed codes and regulations on criteria tailored to local needs in their jurisdiction. In most cases these agencies have approved sources of material as well as some stockpiled base and subbase material. These codes and regulations along with the potential for materials should be taken into consideration when planning roads, streets, walkways, and open storage areas.

1-2. Flexible-pavement structure. A typical flexible-pavement structure is shown in figure 1-1, which illustrates the terms used in this manual to refer to the various layers.

1-3. Soil classification and soil and pavement tests. The procedures for classifying soils and for testing and evaluating soils and pavement mixtures given in EM 1110-3-141 are applicable.

1-4. Explorations and investigations of sources of supply. Subgrade conditions, borrow areas, and sources of (a) select materials, (b) subbase, base, and paving aggregates, and (c) materials for roads, streets, and open storage areas will be investigated prior to pavement design, in accordance with EM 1110-3-141 except as modified herein. In determining subgrade conditions in cut sections of roads, streets, and open storage areas, borings will be carried to the depth of frost penetration, but in no case to less than 6 feet below final grade.



NOTE: 1. The word "structure" is often deleted from the phrase "flexible pavement structure."

2. All layers and coats are not present in every flexible pavement structure. Intermediate courses may be placed in one or more lifts. Tack coats may be required on surface of each intermediate course.

3. Demarcation between subgrade and subsoil is indefinite.

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FIGURE 1-1. TYPICAL FLEXIBLE PAVEMENT STRUCTURE